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SPATIAL SMALL AREA ESTIMATION FOR DETERMINATION OF UNDERDEVELOPED VILLAGES IN THE PROVINCE OF YOGYAKARTA (DIY) IN 2011[1]

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ABSTRACT

Indonesia's poverty alleviation programs are implemented by two approaches target, those are the pockets (areas) of poverty and the poor households. Related with poverty alleviation programs targeting poor areas, in the Medium Term Development Plan (RPJM) 2010-2014, the government through the Development Backward Areas Ministry (KPDT) has determined the backward or underdeveloped regions at the level of district/city. There is no district/city in the province of Yogyakarta (DIY) are classified as underdeveloped region, but in 2011 the poverty rate in DIY is the highest compared with other provinces in Java and Bali. Therefore, the classifications of underdeveloped areas are not optimal if applicable only within the district, but it needs to be seen in the smaller scope, such as village. The main purpose of this study is to determine the underdeveloped villages in DIY in 2011. The average per capita household expenditure is a key indicator in measuring poverty. Susenas data can only be used to estimate the average per capita household expenditure to the level of district. Therefore, to obtain the estimated value in village level, this study used Small Area Estimation approach by combining census data (Podes 2011) and survey data (Susenas 2011). This study used Geographically Weighted Regression (GWR) with Adaptive Gaussian Kernel Bandwidth weighting function. GWR is a linear regression model that produces the local parameters in all locations. GWR parameters estimated are performed by Weighted Least Squares (WLS) method which involving spatial aspects. The results found that there were 13 underdeveloped villages in DIY. Furthermore, the Local Indicator of Spatial Association (LISA) is used to look at the tendency of cluster in underdeveloped villages. Then, maps are used to compare characteristic of underdeveloped villages among others.

Keywords: *poverty, underdeveloped areas, spatial, SAE, GWR*

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